# CONCEPTUAL LEADERSHIP SKILLS FOR THE TWENTY-FIRST CENTURY, A MEANS OF DEALING WITH COMPLEXITY, AMBIGUITY, UNCERTAINTY, AND SPEED

A MONOGRAPH
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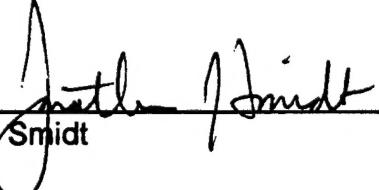
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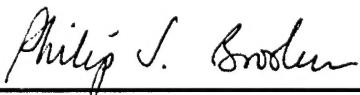
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# ABSTRACT

Will the Army's future brigade and division level leadership require *organizational* and *strategic level conceptual leadership skills* as defined in Field Manual 22-100, Army Leadership: Revised Final Draft, dated June 1998 to perform effectively in twenty-first century Support and Stability Operations (SASO)? By Major Gary E. Luck Jr., USA 50 pages.

The Army is entering an era of unprecedented change evidenced by emerging information age technologies, globalization, and the rapidly changing security environment unleashed by the ending of the Cold War. Futurists are describing the twenty-first century security environment in terms of unprecedented complexity, uncertainty, ambiguity, and speed. The accelerating complexity of the security environment, the broadening spectrum of military operations, the adhocracy in force structure for current operations, and the increasingly inherent conditions where soldiers find themselves operating at tactical, operational, and strategic levels at virtually the same time, evidence the need to exercise conceptual skills.

Conceptual skill is competence in handling ideas and performing human processes that involve perceiving, thinking, adapting, creating, innovating, problem solving, and decision-making. Conceptual skill exemplifies the leader's ability to accurately perceive the environment, assess the variables or forces operating within that environment to formulate effective actions, ideas or plans for old and new problem sets using analytical and intuitive thought processes. The conceptual skills of *systems understanding* and *filtering information* provide leaders tools for perceiving complex environments and accelerating decision processes. The conceptual skill *intent* allows forces to operate effectively in distributed operations through a shared vision and understanding of purpose.

This monograph explores how *organizational-level conceptual skills* as defined in Field Manual 22-100, Army Leadership: Select Review Version, dated October 1998 apply to brigade and division-level leadership in the upcoming decades. The study evaluates a SASO operation because of its applicability to future military operations based on the current National Security Strategy (NSS), National Military Strategy (NMS), and the instability of the national security environment. SASO operations typify the conditions, environments, and unstructured problems likely to challenge organizational-level leadership in the twenty-first century. Additionally, this study looks at the leadership paradigm academics are describing for the future and the relevance to conceptual skills.

The study concludes that future SASO operations will require direct-level leadership to perform organizational and potentially strategic-level conceptual skills as defined in the new FM 22-100. Organizational-level leadership will function in closer proximity to operational and strategic levels of war and exercise organizational and strategic-level conceptual skills in SASO operations.

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# I. Introduction

The twenty-first century environment is one of unprecedented complexity, ambiguity, speed, and organizational change. Conceptual skills provide the capacity to perform effectively in these conditions. Leaders must become versatile, flexible, adaptive and innovative to remain effective in the new millennium.

The Army has struggled throughout history to capture the essence of leadership that defined Napoleon's *genius* or his strategic acuity on the field of battle. Napoleon had the unique ability to see the complete picture of war. He was able to analyze all its different components, understand what was essential and what was not, and combine these factors into an integrated war plan and operational campaign plans.[1] The US Army's new doctrine lays out organizational-level conceptual skills —*systems understanding, filtering information*, and *intent* —to capture these processes.

What made Napoleon so unique was his ability to use the means that he had and take them up to a higher level than had been done before or even imagined.[2] Department of the Army Pamphlet (Pam) 350-58, *Leader Development for America's Army*, states, "the Army must develop confident competent leaders that have the capacity to leverage technology and exploit the full potential of doctrine."[3] The capacity to leverage technology and doctrine resides predominately in the conceptual skill of the leader. The leader exercises conceptual skill in both individual and collaborative forms. Conceptual skills synthesize a leader's interpersonal, technical, and tactical abilities to exploit emerging technology and doctrine. To gain insight to how Army leadership has evolved it is valuable to look back to the post Vietnam era.

Since the mid-70's, Army periodicals have assessed the changing national security

environment, the changing nature of warfare, and technological advances; factors obligating the Army to redefine leadership. The Army has always embraced the theory of classical leadership defined in terms of the positional leader possessing physical and moral courage, skilled with the instruments of war, technically and tactically competent, inspirational, and directive--the *Warrior Leader*. These skills and attributes will continue to be of significant importance, but the changing landscape of the future is continuing to challenge the Army's definition of leadership to broaden and consume greater skill capacities.

Following the Vietnam War 1958-1975, a greater awareness of the interdependence of political, social and military affairs emerged. Political-cultural settings will increasingly militate against exclusively military solutions. Because of these interrelationships, the nature of conflict will increase in complexity, uncertainty, and ambiguity. Military leadership skills now must expand to include political astuteness, imagination, and a "mind" sensitive to and experienced in the essentials of human behavior and human motivation.[4]

In the early 1980's the Army still clung heavily to the premises of classical leadership but continued to adjust the model in terms of character, attributes, principles and leader actions to address the contemporary trends of change. This model was strongly influenced through the synthesis of theory and the analysis of past great military leaders from Alexander the Great to George S. Patton Jr.

In the latter part of the 80's, digital communications, modernization, and distributed operations forced the Army to assess the influence of technology on future leadership. The Army was faced with the challenge of identifying the leadership skills

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needed to leverage emerging technology.

The Army's new leadership doctrine is the product of collaborative research that has attempted to identify the skills necessary to produce effective leadership for information age technology and the changing environment. Army leadership entering the twenty-first century must have a valid doctrine that develops leader ability to leverage changes in organizational structure and technology. The Army needs leaders who can perform effectively in increasingly complex and diverse military operations in the future security environment. Conceptual skill provides a framework for thinking or cognitive strategies harnessing leaders with adaptability to change.

Conceptual skill is competence in handling ideas and performing human processes that involve perceiving, thinking, adapting, creating, innovating, problem solving, and decision-making. Conceptual skill exemplifies the leader's ability to accurately perceive the environment, assess the variables or forces operating within that environment to formulate effective actions, ideas or plans for old and new problem sets using analytical and intuitive thought processes. The new doctrine defines conceptual skill within the three distinct leadership levels--*direct*, *organizational* and *strategic*.

The separation of skill levels is based on the level of command, size of the organization, level of authority and influence, and the degree of complexity, uncertainty and ambiguity indigenous to the operating environment. Ascending levels of command present leaders with increased complexity, uncertainty, ambiguity, and authority, while the span of direct influence diminishes, shown in figure 1-1.

The direct, organizational, and strategic levels of leadership do not correspond with the tactical, operational, and strategic levels of war. The new leadership doctrine

describes leadership-levels in terms of authority and responsibility assigned to different command levels within the corps, division, brigade, and battalion hierarchical structures. Levels of war indicate the authority and responsibility different command levels assume when pursuing of overarching political goals and objectives. Operational art bridges the strategic and tactical levels of war.



Figure 1-1
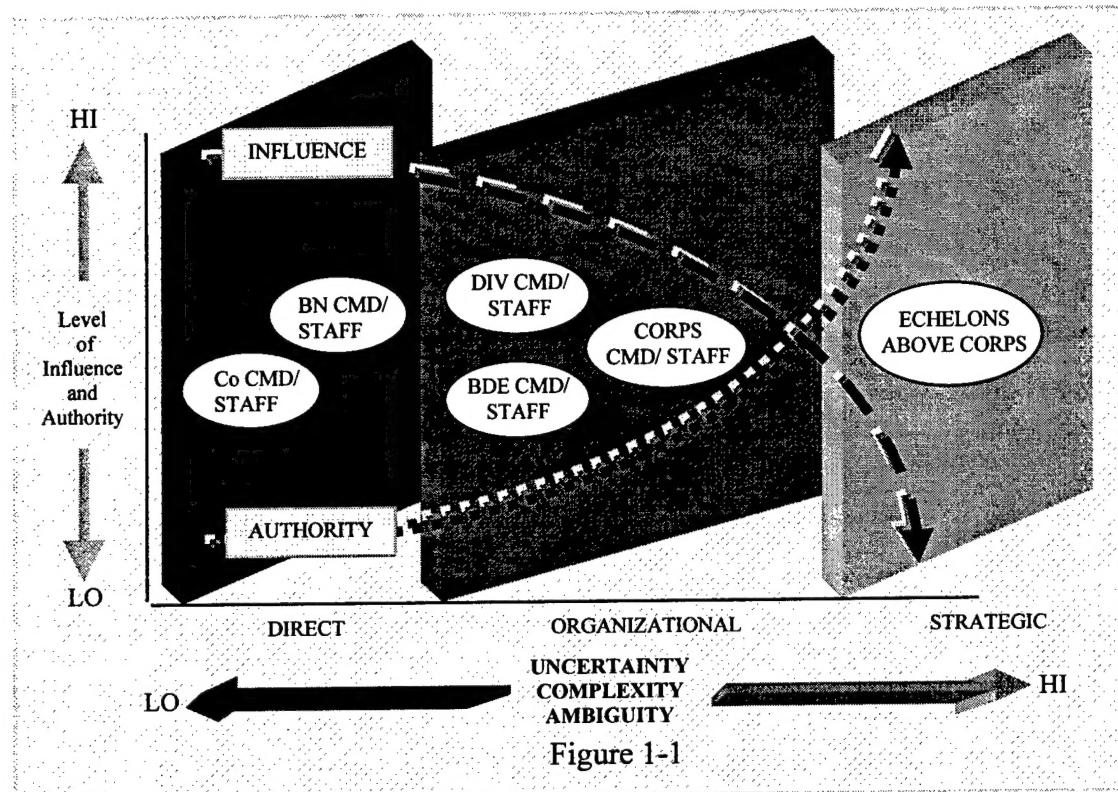
The accumulated effects, of tactical operations and engagements in the design of major operations or campaign to achieve strategic and/or operational objectives constitute the operational level of war. The operational level is the vital link between national and theater strategic aims and the tactical employment of forces on the battlefield, shown in figure 1-2. Depending on the composition of the force, in the future, achieved through the tailoring and modularity of units, organizational-level leaders will potentially perform at any one of the three levels of war--tactical, operational, or strategic.

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Why examine organizational-level conceptual skills? Strategic interests have increased the number and expanded the range of SASO that the armed forces will be required to perform.[5] The future battlefield is expected to increase in the depth, breadth, and height creating a greater distribution of forces.[6] Strategic lift limitations, other service capabilities, time limits, and other factors may compel the army to use only those forces necessary.[7] The accumulative effect of these conditions significantly increases the potential, that organizational-level leaders (brigade through corps) traditionally operating at the tactical level of war will operate at operational and strategic levels.
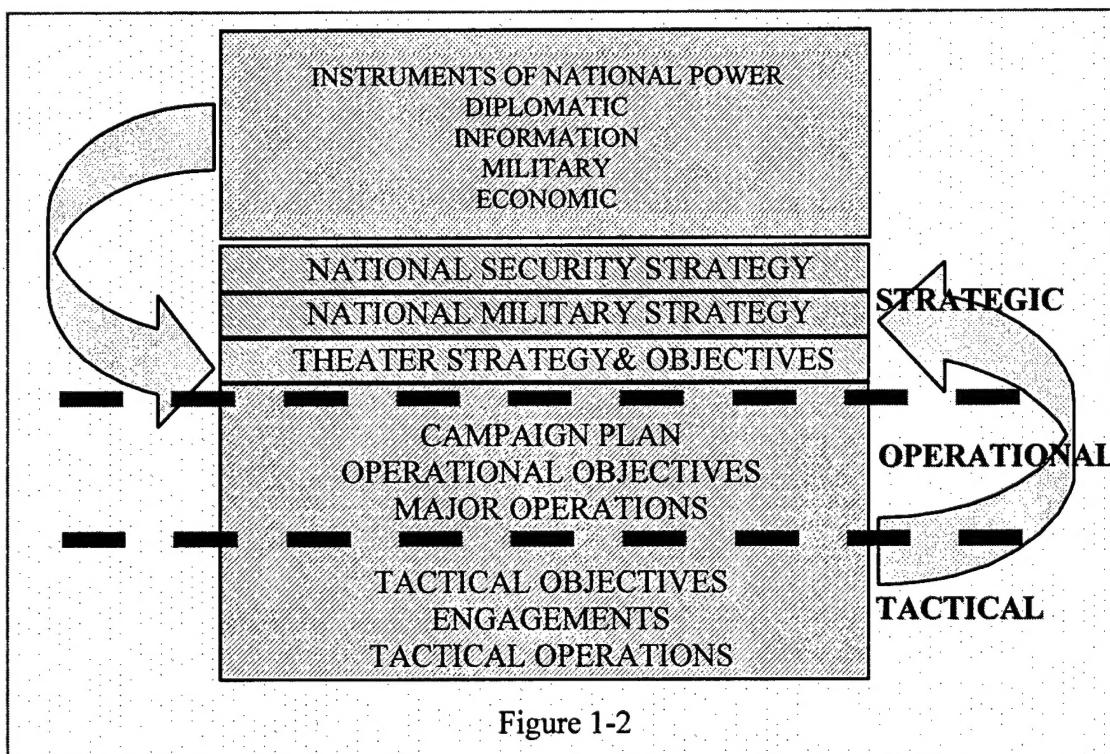


INSTRUMENTS OF NATIONAL POWER
DIPLOMATIC
INFORMATION
MILITARY
ECONOMIC

NATIONAL SECURITY STRATEGY
NATIONAL MILITARY STRATEGY
THEATER STRATEGY& OBJECTIVES

STRATEGIC

CAMPAIGN PLAN
OPERATIONAL OBJECTIVES
MAJOR OPERATIONS

OPERATIONAL

TACTICAL OBJECTIVES
ENGAGEMENTS
TACTICAL OPERATIONS

TACTICAL

Figure 1-2

"Even with the advantage of technology, we will see an increasingly chaotic world where soldiers find themselves operating at tactical, operational, and strategic levels at virtually the same time."[8] This phenomenon is evidenced in recent military operations in Panama, Somalia, Haiti, and Bosnia where the success of tactical operations

are linked more directly to the overarching political objectives. Historically Operations Other than War or Support and Stability Operations have inherently intertwined the tactical and strategic levels of war shown in figure 1-3. The magnitude of implications tactical operations will command in the era of information age technology will intensify across the full spectrum of military operations. This is a product of increased political, social, and military interconnectedness.
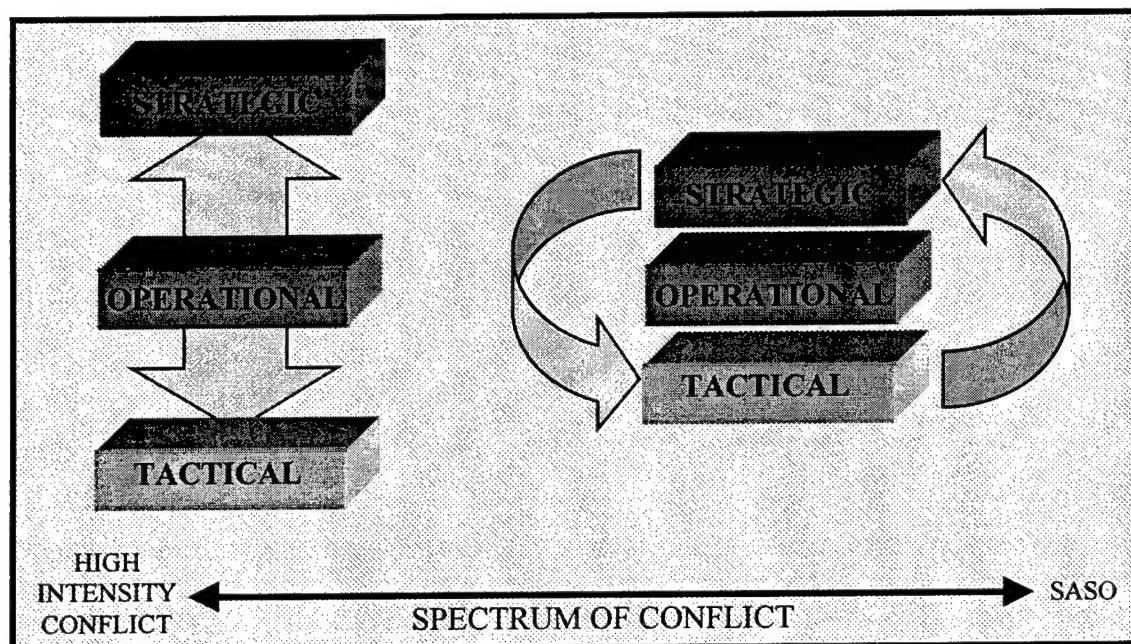


**Figure 1-3**

In addition, futurists are describing the twenty-first century security environment in terms of unprecedented complexity, uncertainty, ambiguity, and speed. The deterministic scientific approaches to conflict of the Cold War are giving way to the less prescriptive approaches to ill-structured problem sets presented by the information age. Organizational leaders will be challenged to operate across the full-spectrum of military operations and potentially across any of the three levels of war.

This monograph explores how *organizational-level conceptual skills* as defined in

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Field Manual 22-100, <u>Army Leadership: Select Review Version</u>, dated October 1998

apply to brigade and division-level leadership in the upcoming decades. For two reasons

the analysis will use a SASO operation as a basis for evaluation. First, based on the

current National Security Strategy (NSS), National Military Strategy (NMS), and the

evolving national security environment US forces will probably contend with SASO

operations in the twenty-first. Second, recent SASO operations typify the conditions,

environments, and unstructured problems sets likely to challenge organizational-level

leadership in the twenty-first century.

This research paper describes the rapidly changing landscape of the twenty-first

century. It discusses the changing trends in the environment and the implications these

trends will have on the domain of leadership as described by futurists. The paper then

examines the exercise of conceptual skills using examples from the ongoing Support and

Stability Operation in Bosnia-Herzegovina. The organizational-level conceptual skills--

*intent, filtering information* and *systems understanding* will be used as evaluation criteria.

The evaluation criteria will either substantiate the applicability of these organizational-

level conceptual skills or will identify additional or other conceptual skills needed to

perform effectively in twenty-first century SASO operations. The criteria are defined in

detail in chapter two.

This paper makes the following assumptions: 1) Complexity, uncertainty,

ambiguity, and speed will be prevalent in the twenty-first century; 2) The tactical and

strategic levels of war will continue to merge together; and 3) As a result, tactical

operations will increasingly produce strategic consequences.

## II. Conceptual Skills for the 21st Century

"Being trained and ready in the 21st century will require the development of leaders who can operate within an environment of unprecedented complexity, ambiguity, speed and organizational change. This provokes the question, will the successful 21st century leader be vastly different from today's leader?"[9]

Conceptual skills will have great prominence on the future battlefield as military operations rapidly diversify, combatants become more fractured, obscure and less predictable, and the strategic environment increases in complexity through increasingly intertwined political, social, economic and cultural relationships. At the turn of the century, a new multi-polar threat is emerging following the disintegration of the bi-polar threat of the Cold War. The prescriptive doctrinal approaches applied to the deterministic nature of the Cold War are diminishing rapidly, as evidenced by operations in Somalia, Haiti and Bosnia. The diversification of current military operations is forcing the Army's doctrine and tactical techniques and procedures (TTPs) to adjust emphasizing the leader's need for conceptual skills to fill the void.

Some form of asymmetric attack is more likely in the future security environment as belligerents seek alternate means to attack US strengths. The instability of the international security environment will continue to increase as nation-states deteriorate, weapons of mass destruction (WMD) proliferate, ethnic and cultural diversity explodes, and economic competition spills over into the military arena. Information age technology continues to progress rapidly as the Army develops, builds and implements the digitized components of Force XXI. Organizational change is a product of both Force XXI and the Army After Next (AAN) programs. These factors create an environment of uncertainty. Future leaders must discern, evaluate, envision, and act in a context of complexity not previously experienced.

The Army seeks answers now about how to develop the human dimension of the force through the year 2025. Leadership will have to leverage change driven by information technology, organizational design, and a changing strategic environment. Future battalion and brigade commanders in the year 2010 are currently serving as first lieutenants and captains. The Army needs to provide a doctrine now that will prepare them for leadership in Force XXI and the AAN. This chapter describes the framework of the new FM 22-100, Army Leadership; defines the conceptual skill domain at direct, organizational, and strategic levels; and examines the relevance of these skills to the emerging requirements of the twenty-first century.

### The Leader XXI Campaign Plan

Changes in U.S. National Security Strategy, the national security environment, and technology provided the Army the impetus to enhance its capabilities in the form of Force XXI and the AAN concepts. The technological and structural changes prompted senior leaders to evaluate the human dimensions needed to leverage these changes. The conclusions would generate policy in the form of a Leader XXI Campaign Plan.

> "The Army Chief of Staff, GEN (Ret) Sullivan directed the Center for Army Leadership (CAL) Leader Development Office (LDO), Fort Leavenworth, Kansas to develop a *campaign plan* that would synchronize the multitude of initiatives (Force XXI and AAN) being developed to carry the force in the twenty-first century. The Army's Leader XXI Campaign Plan when finalized will provide the necessary guidance to prepare leaders who are capable of exploiting the full potential of present and future doctrine, organizations, technology and equipment."[10]

By the year 2000, the Leader XXI Campaign Plan is to develop and integrate leadership and leader development programs and initiatives to prepare leaders:

- ❑ To operate in an environment of increasing complexity, ambiguity and speed.

- ❑ To build effective teams amid continuous organizational, social and cultural

change.

- ❑ To adapt and solve problems creatively.[11]

The Army's Leader XXI Campaign Plan will create these capabilities through orchestrated efforts within three domains; institutional education and training, operational assignments, and self-development programs. The initiatives within these domains will be synchronized with the Army Chief of Staff's six imperatives for the future —quality soldiers; forward-looking doctrine; force mix; realistic training; continuous modernization; and competent, confident leaders.

The new leadership doctrine will help define the means, ways and ends for future leadership and leader development initiatives associated with the three domains of the Army's leader development model previously described.

### Field Manual (FM) 22-100, Army Leadership

The new Field Manual (FM) 22-100, *Army Leadership: Select Review Version*, dated October 1998, provides a comprehensive, forward-looking leadership doctrine with focus to help Army leaders fight and win the nation's wars and serve the common defense of the United States. This doctrinal manual is significantly different from previous editions for two reasons. First, it provides a comprehensive forward-looking doctrine for the entire spectrum of civilian, active army, and reserve leadership. Second, the doctrine defines three distinct leadership levels with analogous skill and action parameters. The framework of the new doctrine attempts to create a progression ladder for future leadership development initiatives.

The new doctrinal framework of leadership describes the Army values and attributes that define character. Those leadership dimensions transcend all leadership

levels. However, the new doctrine organizes leadership skills into three levels - *direct*, *organizational*, and *strategic*. Within this framework skills are subdivided into four domains - *interpersonal*, *conceptual*, *technical* and *tactical*. The specific skills within those domains at each level of leadership correspond to the increasing degrees of authority, complexity, uncertainty, and ambiguity.

### Levels of Leadership Defined

The *direct leadership level* represents the leadership exercised face-to-face in a direct supervision role. Direct leadership is primarily exercised at the *battalion command level and below*, where leaders establish purpose, direction and motivation in a visible context. The direct leader communicates predominately through physical presence. Direct-level leadership functions in environments of less complexity, uncertainty, and ambiguity as compared to organizational and strategic-levels. Higher echelons provide direct leaders purpose, direction and motivation, eliminating much of the complexity for direct leaders. The size of direct-level organizations, coupled with the limited number of manageable resources, reduces uncertainty. To a degree, higher echelons protect direct-level organizations from contending with social, cultural, and political influences and provide interface with joint, agency, and civilian entities.

The *organizational leadership level* pertains primarily to brigade, division, and corps level organizations. Organizational leaders provide purpose, direction, and motivation through intent, feedback loops, and a systemic approach to execution. Organizational-level leaders operate in environments of relatively greater complexity. Planning and orchestrating simultaneous tactical operations to achieve operational or theater strategic objectives is increasingly complicated. The security environment is

more complicated by geopolitics, social and cultural influences, and the increasing dimensions of battlespace. The organizational-level interface with joint, agency, contracting, private and non-governmental entities continue to escalate tactical and operational complexity.

Strategic leaders lead at the major command and national level. Strategic leadership requires significantly different techniques in both scope and skill from organizational and direct leadership.[12] The strategic leader operates in a significantly more complex international environment and must be able to operate amid chaos, think in multiple time domains, and exercise mental acuity to manage change. A strategic leader's ability to communicate effectively with the American people, the American political leadership, soldiers, DA civilians, and the media is important to the organization's success.[13]

The key factors differentiating the three levels of leadership include span of authority, proportional span of direct control, increasing uncertainty, the importance of feedback loops and the complexity of the environment. Organizational-level uncertainty is attributed to structural complexity, networks, and the means of communicating information within larger organizations. Other forces include divergent perceptions, priorities, and mental models. Externally, uncertainty is created through the dynamic relationships of the increasing numbers of variables operating within the environment. As organizations increase in size, the feedback processes become critical in ascertaining the direction and motivation of the organization.

<u>Conceptual Skill Defined</u>

Conceptual skill exemplifies the leader's ability to accurately perceive the

environment, assess the variables or forces operating within that environment, and formulate effective actions, ideas or plans. Conceptual skill is competence in handling ideas. It involves sound judgement as well as the ability to think creatively and reason analytically, critically, and morally.[14] These human processes centered on thinking (perceiving, understanding, creating, and visualizing) allow leaders to develop effective concepts amid the increasing complexities of tactical, operational, or strategic environments.

### Conceptual Skills Direct Leadership Level

The conceptual skill domain centers on the leader's ability to manage ideas, thoughts, and concepts at the direct level. The doctrinal components of the direct-level conceptual skill domain are *critical reasoning*, *creative thinking*, *moral reasoning*, and *reflective thinking*. Critical reasoning deals with the problem-solving aptitude of the leader and partially systems thinking in a relatively simple environment. Critical reasoning ability helps the leader to accurately define problems versus acting on the symptoms. Accurately defining the problem leads to effective long-term solutions.

Creative thinking skill relates to the leader's ability to identify distinct or modified processes that increase the effectiveness of routine operations or to develop new procedures to effectively handle non-routine or unique situations.

Moral reasoning skill reflects a leader's ability to apply the values shared by the organizational culture and institutional Army within the parameters of the law, to any situation and to take the appropriate action. When speed is a parameter for moral reasoning and the element of time is diminished, inherent values and character will significantly impact the leader's ability to arrive at the desired solution. Increasingly

complex situations necessitate increasing amounts of information for analysis.

Reflective thinking is the fourth component of the direct-level conceptual skill. It represents the ability to apply information assessed through feedback loops and personal experiences to improve performance in the future. Leaders should seek to attain feedback from multiple perspectives to enhance understanding. Effective learning is a product of education, training, and the ability to discern causality through reflection. A person who can learn from his mistakes can alter his behavior.

## Conceptual Skills Organizational Leadership Level

The conceptual skill domain of the organizational leader spans three areas - *intent*, *filtering information*, and *systems understanding*. These areas provide a framework that organizational leaders will use to effectively perceive, analyze, and formulate ideas within the context of the environment. Conceptual skills increase in importance as leaders operate in environments of heightened complexity. The organizational environment possesses additional social, political, cultural and behavioral relationships in the form of systems and subsystems that create greater complexity, uncertainty, and ambiguity.

The organizational-level conceptual skill *intent* corresponds directly with the definition, purpose, substance, and meaning the term commander's intent possesses in Army operational doctrine. The commander's intent is a clear, concise statement of what the force must do to succeed with respect to the enemy and the terrain and to the desired end-state. It provides the link between the mission and the concept of operations by stating the key tasks that, along with the mission, are the basis for subordinates to exercise initiative when unanticipated opportunities arise or when the original concept no

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longer applies (FM 101-5, FM 101-5-1). The commander's intent is the commander's personal expression of why an operation is being conducted and what he hopes to achieve (FM 100-5, FM101-5).

Conceptual skills are relevant to how the *intent* is derived. To formulate intent effectively, the organizational-level commander and staff must achieve an accurate situational understanding. This is achieved by applying the conceptual skill processes of *systems understanding* and *filtering information*. The process of systems understanding encompasses situational understanding, but expands the definition in terms of perceiving the environment and the critical variables acting within that environment. The process of filtering information corresponds with focusing collection efforts through tools like CCIR to funnel the amounts and type of information.

These processes enhance situational understanding, which is requisite for concept formulation.

> Concept formulation is the result of the understanding from which the commander derives the sequence of activity that will move his force from its current state to the desired end. Concept formulation involves understanding a future state or condition based on current tangible or intangible factors, and then developing a plan to achieve it. Commanders use creativity and imagination in this concept formulation to form the foundation for improvisation. The concepts that result must account for the relationship among friendly forces, the enemy forces, and the environment and must lead to accomplishment of the end-state. Successful concepts are adaptive, not predictive, and they maintain the commander's flexibility. [15]

The early stages of concept formulation lead to the development of the intent, both maturing in the military decision-making process. The methodology used to "conceptualize an operation" begins with designing the end-state, then working backward in time and space to the start of the initial phase of the operation.

The organizational leader's cognitive ability to do this is a result of experience, a broad perspective, understanding the situation through a systems perspective of the operating environment, and a combination of analytical and intuitive thinking to visualize an operation. Once a vision is formulated, it must be communicated to subordinates to transform the intent into reality.

The organizational-level conceptual skill of *filtering information* pertains to the commander's and staff abilities to manage a tremendous amount of information. Information accessibility will increase exponentially with digitization under the Force XXI design. The organizational-level leadership must shape information requirements attain and organize pertinent information that will ultimately lead to the achievement of tactical and operational objectives.

Analysis and synthesis of information are essential to effective decision-making. Analysis breaks a problem into its component parts. Synthesis assembles complex and disorganized data into a solution.[16] The organizational leadership must not only frame the information requirements using the commander's critical information requirements (CCIR), but ensure efficacy in managing and filtering information. Again, exercising systems understanding to perceive the environment or battlespace accurately is an essential precursor to developing the CCIR.

The organizational-level conceptual skill of *systems understanding,* is the most essential skill in that it provides the basis or foundation for exercising the other conceptual skills —filtering information and developing intent. The Western culture has generally perceived the world through mechanistic or Newtonian models. Meaning America views the world through snapshots and incomplete mental models.[17] Systems

understanding makes leaders aware of underlying or loosely linked causes, which create less immediate or visible effects to a given system.

Mental models are the infinite collection of perceptions stored in the mind to explain cause and effect in everyday life. The social sciences have determined that mental models are developed through a collection of incomplete facts and are generally inaccurate. Understanding this human instinct or trait can promote deeper analysis of the facts that make-up these mental models and thus provide a more accurate perception of the world.

By contrast, systems thinking is a conceptual framework, a body of knowledge and tools that have been developed over the past fifty years, to make the full patterns clearer, and to guide in changing patterns effectively.[18] This implies that the world can no longer be perceived accurately as a sum of parts (the Newtonian paradigm) but must be viewed in terms of patterns and relationships to understand the interconnectedness of the changing world.

These terms deal with how we perceive the surrounding environment, domestic and international, and the relationships of the different elements or actors operating within that environment. Author Dietrich Dorner of the book *The Logic of Failure* defines a system as a network of many variables in casual relationships to one another to include that a variable may have a casual relationship to itself.[19] The author uses a fishpond, shown in figure 2-1, to illustrate a system and the interdependencies of the variables acting within the system.

A *systems understanding,* is important to recognizing that our environment is made up of multiple interconnected systems and subsystems. The critical variables in a

system are those that interact mutually with a large number of other variables within the system.  These variables: if altered, will exert a major influence on the status of the entire system.[20]  If the enemy is analyzed as a system the critical variables in that system may consist of command and control systems, artillery, or armor —whatever gives the enemy power to function and the will to keep fighting.



Figure 2-1.  A pond as a system
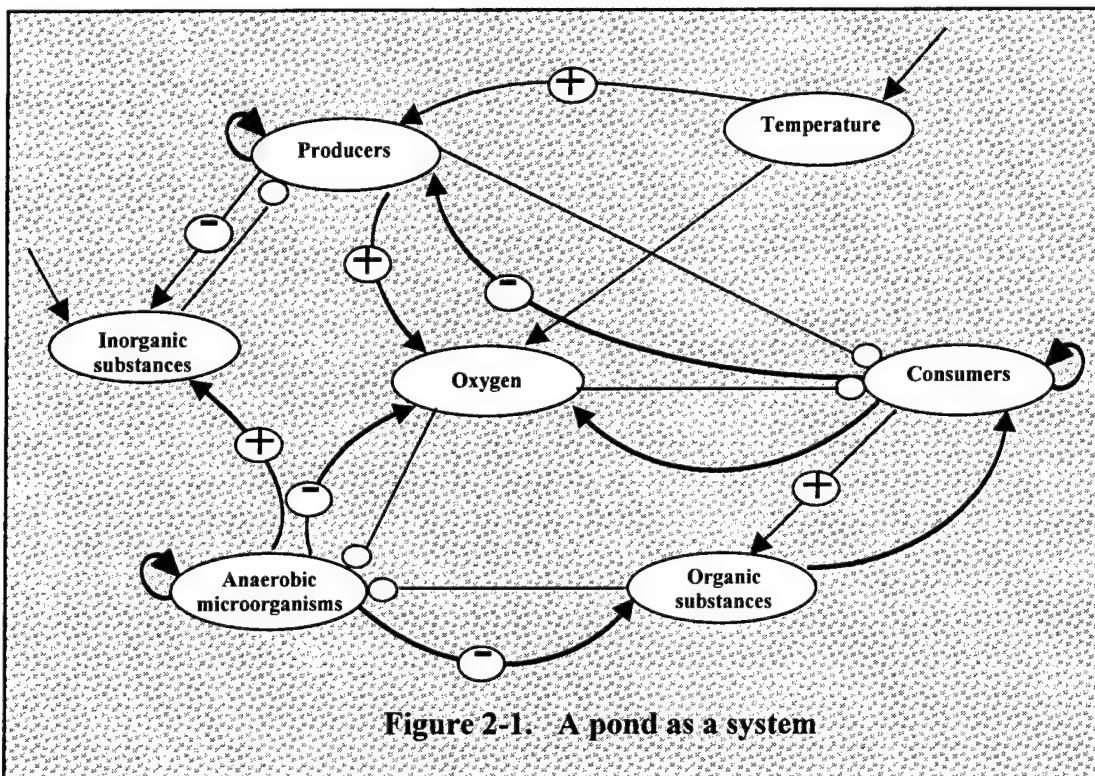
Thus the importance of *systems understanding* to the organizational leader is that it creates a clearer perspective of a complex environment by revealing the dynamic relationships of multiple systems and there relevance to a specific environment.  The more complex a system the more difficult it is to identify the critical variables within that system thus determining relevant CCIR.  Systems understanding will increasingly become a collaborative process to help overcome complexity.

<u>Conceptual Skills Strategic Leadership Level</u>

Doctrinal strategic level conceptual skills include *envisioning, frame of reference development, and dealing with uncertainty and ambiguity.* The conceptual skills required of a strategic leader are exponentially more demanding than those required of organizational and direct leaders.[21] This greater demand is a result of the diverse and complex strategic environment that consists of multiple dynamics such as national will, public opinion, national, international, and regional politics, multinational and joint force dynamics, social and cultural dynamics, in addition to the social, moral, and behavioral fabric of the organization.

*Envisioning* at the strategic leader level is similar in purpose to the organizational conceptual skill of intent in that it produces a vision that provides purpose, direction, and motivation to the organization. The conceptual skill of envisioning is distinct from intent in several respects. First, envisioning is performed in an environment of far greater complexity. The process is a collaborative effort that reflects greater political influence to the ends and ways of achieving assigned goals. Second, strategic leaders take into account the history, culture and values of their organization and the broader social, and political trends of society, and the world when formulating a vision. Third, the vision incorporates new ideas, technologies and future capabilities. Lastly the strategic leader's vision must be consistent with the external environment, alliances or coalition goals, as well as the National Security Strategy, and National Military Strategy.

*Envisioning* in the strategic environment deals with more numerous and complex systems creating relationships that increase ambiguity and uncertainty. Strategic leaders are challenged to instill ownership, shared inspiration and commitment toward goals

within a diverse organization with multiple competing requirements.

The strategic-level conceptual skill *frame of reference* challenges leadership to understand the full capabilities of the organization and where it fits into the strategic environment.[22] The strategic frame of reference involves understanding the influences of the systems operating in the strategic environment, the interdependencies of these systems, and the influence the organization provides to that environment. The accurate understanding of this interdependence allows leaders to make decisions in one area without having negative effects in other areas that would undermine the success of the decision.

The strategic-level conceptual skill of *dealing with uncertainty and ambiguity* is linked with envisioning and frame of reference to provide a foundation from which to anticipate unperceived events. The ability to envision concepts through a developed frame of reference that accurately perceives the environment allows strategic leader's to shape and control the future using the instruments of national power. Shaping the environment and establishing the desired conditions creates the capacity to more readily anticipate and respond to sudden and unannounced changes.

<div align="center">Conclusions</div>

Having defined the conceptual skill domain at the direct, organizational and strategic levels of leadership, what are the conceptual elements that make the direct, organizational, and strategic skill levels distinctly different or unique? Distinguishing between the skill levels is important for several reasons:

- ❑ It will provide a more concise understanding of the task requirements and relationships at each level.
- ❑ It will clarify the developmental requirements to attain these skills at the right time and level during career progression.

❏ It will define the difficulty in ascending to higher level conceptual skills.

The distinction between the three leadership levels is clear in terms of environmental complexity, organizational uncertainty and ambiguity, authority, and influence. The distinction between conceptual processes is not so clear. Critical reasoning and creative thinking transcend the three levels of leadership and act as constituents of various higher-level conceptual processes.

The conceptual skill of systems understanding is a critical tool for understanding complex environments. The systems understanding skill is a constituent of all upper-level conceptual skill processes. The definition FM 22-100 provides should be expanded or cross-referenced to other sources to provide leaders a definitive understanding that can be applied to all situations and environments. The increasing complexity of SASO operations and the security environment makes systems understanding a paramount conceptual skill.

The strategic-level conceptual skill *frame of reference* does not start at the strategic level but represents the aggregate accumulation of knowledge about the Army as an organization and its fit in the strategic environment. This process starts upon entering the service. The strategic aspect of this conceptual skill concerns actions, decisions and programs that will directly influence the NNS, NMS, or theater strategic strategies and objectives. The media will increasingly elevate the events of military operations to national and international levels of public awareness, which immediately influences the strategic environment. This circumstance suggests that leaders operating below the strategic-level must develop a strategic frame of reference.

## III. New Leadership Paradigm for the 21st Century

*Those who are victorious plan thoroughly and adapt decisively. They are like a great river that maintains its course but adjusts its flow. The force disposition has form, but to the opposition looks formless. They are skilled in both planning and adapting and need not fear the result of a thousand battles; for they win in advance, defeating those that have already lost.*[23]

Sun Tzu, 320 BC

Centuries ago as today, complex adaptive systems thrived at the edge of chaos where change was rampant. Complex systems that fail to adapt or outpace peer competitors in times of tumultuous change are defeated or become obsolete. Futurists are projecting a new leadership paradigm termed as *post-heroic or collaborative*, moving away from the theory that one person possesses the solutions to multifaceted problems confronting a group or organization.

This paradigm envisions leadership as an act predicated by *purpose* versus *position*. Leadership that taps into the full capacity of the human potential within an organization through empowerment, mutual respect, mentoring, dialogue, shared vision and values. Leadership exercises systems theory (systems-perspective, thinking and understanding) to evaluate ill-structured or complex problems through a lens that identifies patterns, relationships and trends.

Understanding the environment through a systems approach allows leaders to interpret cause and effect relationships within a complex environment. These new dimensions of leadership are designed to maximize human potential within the organization while leveraging the implications brought on by the information age technology of the new millennium.

### Strategic Environment

Future leaders must be prepared to operate in an environment in which change is

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constant. In the absence of a relatively fixed strategic environment, leaders are faced with a far more complex world that defies the authorities' forecasts of the future.[24] Prominent trends in the twenty-first century will include: continuous changes in the international security environment that will create instabilities and conflict; corresponding increases in the diversity of roles and missions for land forces will continue; and emerging doctrinal and operational concepts that are prompted by technologies and anticipated changes in types of enemy operations.[25]

In terms of threat, US superiority will continue to deter or discourage states from a head-on symmetric conflict, alternatively, some form of asymmetric attack will become more likely as states seek alternative means to neutralize US strengths. Adversaries faced with our large, technologically advanced army will attempt to redefine the terms of conflict and pursue their aims through terrorism, insurgency, or partisan warfare.[26] Non-state actors are anticipated to add ever-increasing complexity to the twenty-first century through terrorism, international organized crime, uncontrolled refugee migrations, and deliberate environmental damage. These forces of change suggest an increased demand on conceptual thinking abilities of future commanders and leaders.[27]

## Challenges for Organizational Level leaders

Expected missions and roles for Army forces will continue to broaden to support our National Security Policy. As our role broadens and the types and intents of potential adversaries become less predictable, the problems to think about or address will become less structured.[28] Individuals operating in the twenty-first century will have less ability to draw upon past-experience to determine effective actions in the complex conditions of the future.[29]

In the future, ill-structured problems will force individuals to consider what is known, then elaborate and conduct new understandings. Support and Stability Operations already require cognitive construction of this type to a great extent. "Even with the advantage of technology, we will see an increasingly chaotic world where soldiers find themselves operating at tactical, operational, and strategic levels at virtually the same time."[30] The information age will present a greater frequency of ill-structured problem sets.[31]

In the twenty-first century there will be a greater tendency for organizational level leaders (brigade through corps) to function at the operational level, driven by the policy of containment and force projection. The new FM 100-5, Operations: Final Revised Draft, dated June 1998 defines the attributes and skills future operational commanders must possess to be effective in the future security environment. The new FM 100-5 states the following:

❑ If anything, the accounts reveal successful operational commanders as men of character who were prepared to cope with disorder and adversity and who possessed the greater reserve of courage, determination, and skill.

❑ He will be faced with near unbearable demands imposed by situations that require quick decisive action in the midst of uncertainty, fog, fatigue, and hardship.

❑ History also shows that truly great operational commanders learned and quickly adapted to the situation at hand; their character and self-development made the difference.

❑ The operational commander must visualize the actions necessary to achieve the operational conditions expected, communicate that to superiors and subordinates, and

generate the organizational momentum necessary to move from the current situation to end state, all while keeping everyone focused on the objective.

- ❑ The most difficult to cultivate and maintain in an operational commander may be creativity. Abstract thinking and plain common sense are essential.

- ❑ The operational commander is an instrument of the government. He acts in an environment that combines the political and the military elements of national power. Since military operations are conducted to achieve one or more policy goals or strategic purposes, the operational commander will often be responsible for translating political guidance into military tasks and missions. He must therefore possess political sensitivity and skill.[32]

These accounts emphasize linkage of organizational and strategic-level conceptual skills in future military operations. The conceptual skills defined in FM 22-100 will help future leaders develop adaptability, visualization, creativity, and abstract thinking for the disorder and uncertainty that lies ahead.

### New Paradigm for Twenty-First Century Leadership

As the environment rapidly changes around us, many of the leading academics in the social sciences believe that leadership must change to adapt to the uncertainty, complexity, speed and change that grips society on the edge of a new millennium. Not only is their overwhelming consensus that leadership must change, but the way leaders perceive the environment must change radically.

The Kellogg Foundation helped fund a four-year project assembling the leading active minded leadership scholars and "reflective practitioners" from the United States to wrestle with some of the most important challenges facing industrialized societies on the

brink of the new millennium.[33]  The purpose of this four-year collaborative effort was to examine the understanding of and capacity for leadership in the twenty-first century. The four-year effort produced a composite report titled - *Rethinking Leadership* with the following insights.

In the last decade of the twentieth century driving forces exist that suggest that the *purpose* of leadership in the twenty-first century, rather than the definition, must be the focal point of our leadership studies.[34]  This admonition defies the traditional models of leadership where actions and decisions are predicated by one's position within the organization. A basic premise of collaborative leadership is recognition that no one person has the solutions to the multifaceted problems that a group or organization must address.[35]

The contingent is that leadership is collective and reciprocal. Processes must surface that allow the collective wisdom within groups, staffs, or organizations to surface. Leadership in this context requires a set of principles that empower all members to act. Organizations must strive to create environments where people can thrive, progress, and live in peace with one another. These organizations create climates of reciprocal care and shared responsibility.

Understanding that the patterns of hierarchical leadership that served this country in the past are not well suited to the global complexity, rapid change, interdependency, and multifaceted challenges described previously.[36]  Within the emerging information age, the primary challenge for leaders will be to create organizations that manifest a more educated, committed, self-managing work force striving to be continuous life-long learners.[37]  Future leaders will act in the capacity of facilitators, stewards, coaches,

designers, and teachers. Effective leaders understand that every person has leadership qualities that must be recognized and leveraged.

The new leadership paradigm is transforming the role of *followers* and revolutionizing the design of organizations for the twenty-first century.[38] A basic premise of collaborative leadership is the recognition that no one person has the solutions that a group or organization must address.[39] Collective action is based on shared vision, ownership, mutual values, and respect.

The evolution of collaborative leadership has been deeply influenced by the natural sciences as well as history.[40] The Newtonian concept of a mechanistic world where people followed directions and where repetitive, learned responses were sufficient, has given way to organic, systems-oriented and dynamic understanding of how people, groups and organizations operate.[41] A systems perspective requires nonlinear, holistic and multifaceted approaches to leadership that expresses interacting participation, open communication, continuous learning and attention to relationships.[42]

## Conclusions

The twenty-first century leadership paradigm provides concepts and principles that integrate leadership, organizations, and conceptual skills to the capacity to function effectively in environments of unprecedented change. Conceptual skills as defined in FM 22-100 represent collaborative processes at the organizational and strategic levels. The efficacy in the exercise of conceptual skills will be to the extent future leadership can maximize the full potential of these collaborative networks. These networks must underscore collective and reciprocal leadership, environments in which people can thrive by sharing responsibility, learning continuously, and transforming followers into leaders

based on a shared vision. Equally important is the capacity for future leadership to exercise systems perspective to achieve holistic and multifaceted approaches to complex ill-structured problems.

These concepts and principles help build teams, units, and organizations that can more effectively exercise conceptual skills and processes at all levels by maximizing the cognitive capacities of individuals and groups. Organizations that practice and embody these principles create deeper understandings of the organizations fit in the environment and a greater level of shared knowledge; both can be used to leverage complexity and change. So far, this monograph has described the doctrinal conceptual framework for Army leadership, the changing strategic environment, and the new paradigm for twenty-first century leadership the next section will examine the leader challenges future SASO operations will present.

### IV. Case Study Bosnia-Herzegovina, Operation Joint Endeavor

This chapter examines Operation Joint Endeavor (OJE) to establish the framework needed to evaluate the applicability of the organizational level conceptual skills - *intent, filtering information, and systems understanding* to an environment relevant to the 21$^{st}$ century. Based on the previous examination of the future strategic environment, trends of instability, characteristics of future Armies, the National Security Strategy, and the National Military Strategy; Operation Joint Endeavor represents a type of military operation the US will likely be involved in during the next several decades.

This chapter will focus on the organizational level environment and the events or actions that represent the exercise of organizational or strategic level conceptual skills. Providing a historical perspective on OJE offers an opportunity to analyze organizational-level conceptual skills during a Support and Stability Operation.

The analysis will isolate the exercise of organizational and strategic-level conceptual skills. This methodology will demonstrate how conceptual skills apply at different leadership levels in a SASO environment representative of the twenty-first century. The results of the analysis will demonstrate whether the new doctrine has correctly identified the right conceptual skills for the appropriate levels of leadership. Assessing these relationships examines how well the new doctrine articulates what future leaders need to operate effectively in the first decades of the twenty-first century.

Operation Joint Endeavor (OJE) helped end the most brutal civil war in modern history. The NATO-led, multinational Implementation Force (IFOR) intervention into Bosnia-Herzegovina established the necessary conditions needed to pursue the requirements of the Dayton Peace Accords (DPA).[43] The initial intervention force under

the IFOR designation has undergone numerous transformations related to force structure, command relationships, operational tempo, and tasks related to achieving overarching objectives. The current force operating in Bosnia is referred to as NATO's Stabilization Force (SFOR), which continues to enforce the Dayton Accord's military aspects and directives in the former Yugoslavia.

## Current Threat in Bosnia-Herzegovina

The US military is operating in an environment complicated by the competing agendas of three internal factions —Muslim, Croatian, and Serbian —all subject to external influences.[44] The current threat to forces and agencies operating in the OJE area of operations (AOR) includes non-compliant military members, paramilitary groups, corrupt police, criminal elements, extremist groups, and political hardliners. Other threats include the controlled media, the wide-ranging political struggle, economic stagnation, and the public response to the capture of indicted war criminals.[45]

Unconventional warfare is emerging in cases like the Republika Srpska, an illegal oppressive communist-style local government that continues to strengthen its chokehold over the citizenry in order to maintain power, despite the declining conditions of the community. Internal unrest is emerging within the partitioned communities, leading to power struggles for control. Corruption dominates economics and ethnic extremist activities driving the SFOR towards involvement with the policing of civil agencies and economic institutions. These conditions reflect the style of conflict anticipated for the twenty-first century. The end of the Cold War has released the paralysis of pent-up hatred of ethnically or culturally diverse communities. This compartmented environment creates multiple actors and interdependencies that significantly complicate military

operations.

## Operation Joint Endeavor Overview

In early 1993, the US started developing detailed plans to provide a US ground force Task Force Eagle (TFE) under NATO control as an intervention force in Bosnia-Herzegovina to separate warring factions following a signed General Framework Agreement for Peace (GFAP). On 14 December 1995 the forming warring factions (FWF) signed a General Framework Agreement for Peace in Paris. The United States committed the 1st Armored Division as the central piece of Task Force Eagle, the "Multinational Division - North," one of three multinational divisions comprising the Implementing Force (IFOR), under the command and control of the NATO Allied Ready Reaction Corps (ARRC), whose headquarters was in Sarajevo.[46]

Additionally, the US contributed forces to augment the ARRC headquarters, a National Support Element (NSE), comprised of elements of USAREUR and V Corps in Hungary and Croatia, and air and naval assets working throughout the Area of Responsibility.[47] The world continues to watch, expecting Task Force Eagle to:

- ❑ Ensure cessation of hostilities between the Former Warring Factions (FWF);
- ❑ Ensure cooperation of the FWF with the Implementing Force (IFOR);
- ❑ Separate the FWF's by ensuring withdrawal, NLT D+30, from the Zone of Separation (ZOS);
- ❑ Ensure freedom of movement in the territory of Bosnia-Herzegovina;
- ❑ Supervise the transition of control between the elements of the FWF in designated Areas of Transfer by D+90; and
- ❑ Monitor status of forces throughout Bosnia-Herzegovina.[48]

The nature of the Dayton Peace Accords forced TFE to address a broad spectrum of military tasks. TFE is challenged with orchestrating military operations with other instruments of national power to set conditions for fulfilling all theater strategic objectives.

Controversy continues to surround the DPA's ability to bring about lasting peace in the former Yugoslavia. The DPA focused more exclusively on the military mission than on the civilian and political aims. The linkage of ends, ways, and means remains disjointed. The military quickly accomplished its stated tasks but now concentrates on the implied tasks of assisting in the accomplishment of all the *other* accords contained within the DPA.[49]

This criterion has increased the complexity to the overall mission by broadening the scope of military tasks and operations into new areas removed from conventional warfighting doctrine. Conceptual skills are the essential tools needed to bridge the gap between doctrine and previous tactical and operational experiences to the unprecedented challenges of the new reality. These deviations whether minor or significant entail conceptual tools to adapt to new environments and resolve these unstructured problems. Researches suggest that leaders can become adept at handling unstructured problems only through routine exposure.

The implied military tasks within the DPA will cause TFE's role to interface more heavily with the factional governments, politics, economic, and law enforcement entities. Future peace operations will force military actions to fuse more closely with diplomatic, economic, information, and humanitarian efforts to achieve desired conditions. The political sensitivity of SASO operations requires TFE to sustain flexibility, versatility and reach in order to respond effectively. These trends also demonstrate that leaders need a strategic frame of reference to function effectively in this environment.

While the DPA was successful in separating the former warring factions, it was not an endorsement for the factions to achieve their desired end states.[50] The Muslims

still contend for a united Bosnia under Muslim control; the Croatians want to annex currently controlled areas to Croatia; and the Serbs still want a separate and distinct Serbian nation. The United States and its allies are challenged to satisfy Dayton's intent until the factions achieve their end states or change their current mindsets.[51]

These conditions create several challenges for TFE leadership. Changing the mindset of the FWF's without using lethal force is a serious challenge for US forces. The instruments of national power will need to be closely orchestrated with ongoing military operations to send the right messages to the appropriate leaders and entities. These conditions provide challenges to leadership that cannot be solved through doctrinal guidelines, experience bases, and historical perspectives. Ill-structured problems of this nature require changing frames of reference, systems understanding, filtering information and vision short-term and long-range.

Understanding the relationships of the various entities acting within the TFE environment is essential. The relationships of the various entities define the enemy for military operations. When power is projected within the Joint Area of Operation (JOA) or AOR using the presence of military force, information, or diplomatic means, our leaders must anticipate and understand the effects of these actions with respect to all the factions and entities engaged in this conflict. Without a clear understanding of these relationships, the introduction of power may not achieve the desired results and in some cases, may achieve the opposite of the intended results. These probabilities highlight why systems understanding is so important; it allows leaders to layout all the interdependencies and calculate effects of military actions.

Determining whose mindsets need changing and what the intents of various

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factions and entities are is a challenge for intelligence collection. Effective military operations require innovative TTPs and operational considerations. Understanding the environment is the cornerstone that will allow TFE to shape the environment, enforce the DPA, and set conditions for achieving overarching political objectives.

## Force Structure for OJE

The Joint Endeavor organization for combat was fundamentally different from the standard force structure used by American units in the past. The Army's current division and corps organizational designs including Force XXI will be challenged by the complexity of the twenty-first century environment to provide the needed tactical and operational capabilities needed in a SASO.

The future concepts for military operations in the twenty-first century project that the Army will force tailor necessary assets to create the needed capabilities down to the lowest command level to achieve efficiency of force in terms of speed and reach. Risk and force protection will remain important planning factors, but the tendency will be to give lower level commands greater authority and responsibility.

The initial OJE force structure consisted of a single US division organized with multinational brigades numerous Corps-level support units directly under division control, a non-US Corps as its operational headquarters, and USAREUR (Forward) as the National Support Element. These unique command relationships and demands of the operations resulted in a migration of combat service support below their doctrinally assigned level.[52] Civil Affairs, Psychological Operations, and intelligence assets normally assigned to a Corps were tailored to augment the brigade force capabilities.

Recent SASO operations have increasingly demonstrated trends toward the

employment of adhoc organizational designs. The Force XXI concept suggests this tendency will continue based on already-mentioned factors. This condition not only effects the leader's frame of reference, but also elevates complexity to the organizational and strategic-levels because of the assets and capabilities involved.

## Organizational-Level Environment

However the future is sliced three major components —*complexity*, *speed*, and *ambiguity* are apparent.[53] There will be greater complexity in terms of growing group dynamics within the organization, joint and combined operations and partnerships and task forces with other agencies, nation-states, economic entities and non-governmental organizations and agencies.[54] TFE grapples with these challenges daily. Accomplishing the military objectives within OJE requires increasing interdependency among the national instruments of power, and joint, combined, and multinational forces. Speed adds to the complexity of military operations.

Speed is a product of the "third wave" concept of data proliferation. New technologies, along with the reduction of processing layers that acted as decision-making speed bumps, will cause information overload, gridlock conditions and the unprecedented compression of time.[55] The media projects images around the world instantaneously. Though not fully digitized, multinational TFE must address these conditions.

The distributed, multinational nature of the OJE environment challenges TFE to process and disperse information rapidly enough to effectively respond to problems. More important, TFE must execute decision-cycles with speed unmatched by the adversary in order to engage through nonlethal means. TFE executes decision-cycles by determining adversarial intentions through intelligence collection, then influencing these

intentions through a projection of military force, information operations, or diplomatic negotiations before the entity can act. Speed will continue to increase as we move into the new millenium, its implications readily apparent in OJE. Ambiguity inhibits the speed of military decisions.

There will be ambiguity in a multitude of new unknowns, vagueness, and metamorphoses.[56] Ambiguity is evident in the cultural and political divergence of the factions, the diversity of potential threats to the IFOR, and the multinational, joint, and NATO relationships. These twenty-first century conditions shroud the deployment and employment stages of OJE.

### Organizational-Level Planning Challenges

The political sensitivity surrounding the signing of the peace accords complicated structuring command relationships above division-level. The National Command Authority withheld disclosure of US commitment to participate in peace enforcement operations in Bosnia to help force warring factions to reach a peace settlement. The warring factions were not inclined to reach a mutual agreement for peace until the US stated it would commit forces. This official silence significantly delayed the release of an authorization document that would formally initiate the CJCS crisis action procedures, commit funds and resources towards US involvement in Bosnia. The inability to release this document hindered planning, preparation, and deployment operations.[57] The repercussions forced V Corps planners to assume operational and strategic level planning responsibility for OJE.

Formal crisis action procedures would have established direct command relationships. In absence of a formal notification, the United States Army Europe

(USAREUR) did not issue an order, a commander's intent, or a task organization to subordinate headquarters.[58] The NATO chain of command, through the Allied Rapid Reaction Force Command (ARRC), was issuing information to 1st Armored Division, while the US chain of command was issuing information through the CINC's system.[59] In essence, V Corps, the designated lead planner for contingency operations in Bosnia-Herzegovina, had to plan and execute unilaterally, pending closure of the peace agreement and subsequent inclusion into the NATO-led ARRC command structure.

The requirement for V Corps planners to plan unilaterally forced the commander and staff to function at the strategic and operational levels simultaneously. Typically, a higher echelon staff would have addressed the strategic level issues. The V Corps staff contended with national security, and theater strategies while cross-walking the strategic level with the tactical level of warfare.[60] Additionally, V Corps staff assumed greater responsibility for shaping the theater strategic environment. Shaping the theater environment occurred through the use of diplomatic, informational, and military instruments of power.

This situation represents very relevant conditions to future contingency operations. The potential that future geopolitics will disrupt formal planning systems during the building of multinational or coalition forces under NATO or the UN is very likely. Though this scenario is somewhat unique, Support and Stability Operations inherently intertwine strategic and tactical levels of warfare.

### Organizational-Level Execution Challenges

Task Force Eagle (TFE), the multinational US-led task force assigned to operate in the northeast quadrant of Bosnia-Herzegovina, faced several daunting tasks in the early

phases of this operation. The US-led TF executed a Transfer of Authority (TOA) with United Nation Protection Forces (UNPROFOR) within 96 hours of the FWF's signing the DPA. Predeployment, deployment and employment stages of the operation were compressed and simultaneous due to the political restraint put on the operation.

The precondition for warring factions to sign the peace accords before intervening forces could deploy compressed the deployment process. Additionally, TFE leadership needed to project a credible multinational force throughout a 33,000 square-mile AOR in fairly extreme winter conditions. To project credible force into a constrained environment, leaders needed to think operationally to create conditions for success. Any serious incident in the early stages of the operation could have jeopardized US credibility and mutual commitment of the FWF's--potentially negating successful attainment of NATO/US objectives.

The concept of simultaneous deployment and employment is not new to US military operations. In OJE, the strategic ambiguity associated with the decision to commit US forces, together with the demanding timelines of the DPA, made simultaneous deployment and employment a significant decision.[61] Some of the most important milestones of the DPA had to be met during some of the most difficult phases of the deployment.

The simultaneity and sensitivity of operations in the early stages of OJE imply that all levels of TFE leadership would be forced to contend with unprecedented challenges. Additionally, the distributed nature of OJE has established conditions where soldiers find themselves operating at tactical, operational, and strategic levels at virtually the same time. This adds evidence to the need of organizational and strategic-level

conceptual skills at lower levels.

Early stages of operation OJE required TFE to simultaneously employ combat power; conduct TOA; strategically deploy support, life support, and follow-on forces; conduct RSOI; employ C2; conduct reconnaissance; build infrastructure; and perform mobility tasks to maintain freedom of movement. The distributed nature of OJE rapidly dispersed the force; leadership at battalion levels and above quickly lost the capacity to provide purpose, direction, and motivation by direct means. The increasingly distributed nature of SASO operations diminishes the leaders span of direct control illuminating the need for intent (vision) to guide actions soldiers actions throughout the theater. Exercising a mechanistic approach to seemingly tactical tasks no longer achieves the desired conditions for success.

> "Future force projection missions, like those throughout history, will demand well-developed operational and logistical planning, force mix, appropriate sequencing into and out of a theater, and a constant requirement for soldier and unit versatility. Such missions will require leaders and units that can operate in ambiguity and have the agility to adapt and adjust. Set piece thinking does not fit force projection. All of these requirements will occur in a joint or combined environment."[62]
>
> General Fredrick M. Franks, Jr.

General Frank's statement captures the complexity of future environments and the need for leaders to envision operationally in width, breadth, and depth (concentrating force in time) versus the typical set piece approach. The mechanistic approaches to RSOI and other tactical operations are giving way to needed operational approaches where civil affairs, intelligence agencies, diplomatic representatives, contracting, joint assets, and information operations are incorporated. These conditions require lower levels of leadership to function at the organizational-level. To effectively operate in this environment, organizational-level conceptual skills - *intent, filtering information* and

*systems understanding* are required.

This environment subjects leadership to filter multitudes of information to understand the relationships between the various entities acting within TFE AOR's to effectively act and respond. Leaders must achieve a comprehensive frame of reference that encompasses the entire organization and its fit in the environment. The inherent dispersion of the force prevents communicating through direct means; thus the leader's intent elevates in importance and must be transformed within the organization to effectively direct achievement of military objectives.

Employment or mission execution is increasingly characterized by multiple engagements. Engagement planning is the process of identifying potential enemy targets for possible engagement, then determining the appropriate engagement system.[63] Targets in this environment are not necessarily military, but include numerous bodies of people, agencies, organizations and decision-makers. This concept (engagement planning using multiple means--assets) is essential for effective integration of combined arms forces in SASO operations.

The Joint Military Commission (JMC) process was the centerpiece for nonlethal engagement planning and execution.[64] The TFE mission was the following: "On order, TF Eagle deploys to SECTOR TUZLA, Bosnia-Herzegovina, and conducts peace enforcement operations to compel compliance with peace accord; ensures force protection."[65] The JMC process developed by the UNPROFOR force would provide an instrumental means for creating the conditions needed to achieve military objectives through negotiation and nonlethal engagement.

The JMC coordination meetings "provide a forum for military and civilian

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authorities to coordinate implementation of the military aspects of the peace agreement."[66] The term JMC describes formally established bodies in which local representatives of different parties in conflict meet under IFOR supervision. IFOR leadership uses this forum to convey purpose, direction, and motivation, exchange information, make decisions, and resolve disputes.

The analysis of the DPA established theater strategic, operational, and tactical military goals and objectives. The JMC process provides the means for communicating these objectives to the FWF's. This process provides a collaborative means for developing a joint interpretation and collective action towards the achievement of the desired end-state. In these forums the commander's intent is conveyed to each to representatives of the former warring factions typically in a trilateral meeting. The OJE experience indicates that in a SASO operation the commander's intent may play a more crucial role than in traditional operations.[67]

Each level of command has participated in the JMC process to some extent. One of the main purposes of the process is to place responsibility for the implementation of the peace accords directly on the FWF's. These forums provide the IFOR commanders the opportunity to engage representatives of the factions using nonlethal means such as arriving at meetings using tank platoons as escorts, AH-64 over-flight, or positioning of self-propelled artillery.

This brief case study of OJE has demonstrated several trends and conditions that will represent future Support and Stability Operations. It is evident that the future environment is going to be very different from the present. OJE as will future operations present leaders with unstructured problems. Leaders can depend less on past experience,

current knowledge, procedures, doctrine, and tactics to effectively confront future unstructured problems.

The distributed nature and political sensitivity of SASO operations demonstrates that organizational and direct-level leadership will operate in strategic-level environments consistent of complexity, uncertainty, and ambiguity created by the political, social, and cultural influences. Non-lethal tactical engagements are performed using military, diplomatic, and informational instruments of power to influence adversarial decision-makers. The influence of these decision-makers links these tactical operations with theater strategic objectives.

The leadership that performs tactical operations so closely linked to theater strategic objectives must think in operational terms to achieve desired results. Thus tactical operations require augmentation of assets normally held at operational echelons. These assets include intelligence, civil affairs, possibly diplomatic, media, contracting, civil-military operations command integration, and joint assets to achieve desired conditions.

As the roles and missions of the military expand, it will be harder to provide enough education, training, and practice in doctrine, tactics, techniques, and procedures for all these broader concerns. To supplement current training approaches, officers need sound conceptual thinking skills to meet the unexpected needs of the future.[68]

# V. Analysis

The purpose of this chapter is to evaluate the organizational-level conceptual skills exercised in Operation Joint Endeavor, a Support and Stability Operation representative of the future. The organizational-level conceptual skills--*intent, filtering information, and systems understanding* are used as evaluation criteria to validate the applicability of these skills to organizational-level leadership. This evaluation will determine whether these skills are appropriate or whether additional conceptual skills are needed to perform effectively in twenty-first century SASO operations.

The separation of skill levels is based on the level of command, size of the organization, levels of authority and influence, and the degree of complexity, uncertainty and ambiguity indigenous to the operating environment. Ascending levels of command present leaders with increased complexity, uncertainty, ambiguity, and authority, while the span of direct influence diminishes.

Conceptual skill levels can further be differentiated in terms of vertical and horizontal parameters. Vertical parameters can be defined in terms of the level of responsibility a particular commander and staff inherit in terms of achieving national and theater strategic goals. The horizontal parameters concern the number of resources a particular commander and staff control and the differentiation of tasks within that command being performed to achieve theater strategic objectives. Strategic level skills are linked to strategic objectives. Organizational level skills are linked to the attainment of tactical or operational level objectives.

In SASO operations there is little separation in the strategic, operational, and tactical levels of war. The operational level is defined more in terms of the proportional

effects of tactical operations versus the accumulative effects of engagements and tactical operations. In the case of OJE, achievement of tactical objectives within a brigade AOR is equivalent to stated theater strategic objectives.

The case study of OJE depicts an environment that requires exercising both organizational and strategic-level conceptual skills at multiple command and staff levels to achieve the overarching political objectives. The compression of strategic and tactical levels of war require lower level commands to contend with dimensions of the strategic environment characterized by the highest levels of uncertainty, complexity, and ambiguity.

The strategic environment requires detailed knowledge of the political, economic, informational, and military elements of national power and the interrelationship among them.[69] The strategic environment requires leadership to develop a detailed understanding of the linkage between NSS, NMS, theater strategic strategy's and objectives. The strategic leadership must have knowledge of the international and national political environment and its linkage to U.S. military operations. Understanding the regional environment in terms of political, social, and cultural influences on military operations is also paramount. Lastly, the strategic level leadership must understand the orchestration of national instruments of power within the theater and the fit of military operations in that environment.

It is evident through the examination of OJE that brigade, division, and corps level command and staffs contended with the complexity characterized by the strategic-environment in order to plan and execute predeployment, deployment, and employment operations effectively. This is evidenced in the nature of the environment, the ambiguity

of the indigenous threat, the disjointed command relationships during planning, joint and multinational participation and the differentiation of military tasks established by the DPA.

The complexity of the OJE environment is cause for even organizational-level leaders to build a *strategic* frame of reference. The strategic frame of reference includes understanding the contributions of diplomatic, information, economic and military instruments of power to shape the intents of the FWF's leadership. Additionally, it includes understanding the linkage of NSS, NMS, and theater strategic strategies; the political, social, cultural, and historical positions of the different factions; and the capabilities, intent, and objectives of the multinational players within Bosnia-Herzegovina.

Multiple means were necessary to reach opposition decision-makers in OJE. The military leadership is charged with orchestrating available means to synergize effects. The means include diplomatic representatives, UN representatives, civil affairs, the media, agencies, contractors, NGO's, PVO's, and joint assets. In OJE, higher echelon assets were habitually pushed to lower levels of command to provide needed capabilities. These additional resources add complexity and forces leader's to reconstruct frames of reference.

The strategic-level conceptual skill *envisioning* incorporates this frame of reference to synergize military operations with the strategic level objectives. In a SASO operation such as OJE, tactical objectives are inextricably linked to the strategic objectives. Levels of degree can be argued, but the elements exist that potentially necessitate battalion through corps level commands to operate in these domains.

The exercise of organizational-level conceptual skills--*intent, filtering information* and *systems understanding* is demonstrated at company command levels and above. The distributed nature of tactical operations validates the requirement for intent (vision) to instill purpose, direction, and motivation beyond the leaders span of control. Establishing direction significantly improves communications and decision-making within an organization. Assigning actions to various elements through intent reduces conflict, improves cooperation and increase efficiency.

Organizational-level conceptual skills are defined by the capacity to function in environments of greater complexity. The complexity of the threat combined with the differentiation of tasks demonstrates the need to exercise organizational level conceptual skills –*filtering information* and *systems understanding*. The need to exercise these skills is demonstrated at company level and above.

Understanding the relationships of the various entities acting within the TFE environment is essential and requires systems understanding. The relationships of the various entities define the enemy for military operations. Without leaders who clearly understand these relationships, military actions will not consistently achieve desired results. Targeting the mindsets of adversaries challenges intelligence collection on one end and the innovative design of tactical operations on the other.

In a conventional operation, organic intelligence assets will function in a benign environment--disconnected from the non-military complexities to focus on a defined enemy entity within. In a SASO environment intelligence assets must be focused on a broad spectrum of entities to include the political and social leadership; the local population; agencies; interest groups; law enforcement; criminal and terrorist activity;

gangs; militia; and military entities to understand relationships and the environment.

The ability to perceive the environment in these terms requires filtering information and systems understanding conceptual skills. A systems understanding of the environment provides the leadership the ability to accurately read the environment and focus information collection through tools such as CCIR. To various degrees OJE demonstrated the need to exercise these skills down to company level.

Conducting non-lethal engagements in support of JMCs or unilaterally requires leadership to envision operations and contingencies in a strategically complex environment. Leadership must engage identified targets non-lethally in politically, socially, and culturally connected environment. The targets typically require multiple means of engagement to create the conditions necessary to achieve objectives. The targets in SASO operations are not exclusively the military force but include the will or intent of various decision-makers within the surrounding community.

These operational requirements further demonstrate the validity of organizational conceptual skills. Non-lethal engagement requires horizontal differentiation in terms of additional assets, vertical integration with other instruments of power and strategic objections in addition to expanding the role of military operations. The cumulative effect of these factors creates greater complexity and the need for ascending conceptual skills beyond the scope of the direct leadership level.

## VI. Conclusions

Future SASO operations in the rapidly changing security environment of the information age will increase the necessity and importance of conceptual skills at all leadership levels as defined in the new FM 22-100, Army Leadership. The flourishing complexity of the environment, the broadening spectrum of military operations, the adhocracy in force structure, and the increasingly inherent conditions where soldiers find themselves operating at tactical, operational, and strategic levels at virtually the same time evidence the need to exercise conceptual skills.

Future SASO operations will require direct-level leaders to possess organizational and potentially strategic-level conceptual skills. Organizational-level leadership will function in closer proximity to operational and strategic levels of war and exercise organizational and strategic-level conceptual skills in SASO operations.

Several factors will accelerate complexity in the twenty-first century. First, the interconnectedness of geopolitics and economics at the strategic level and the underlying interdependencies of adversarial military forces with their political, social, and cultural communities at the operational and tactical level. Second, future threats will be less symmetrical and harder to distinguish from the indigenous populations. Third, the number of unprecedented challenges will increase with the expanding spectrum of military operations driven by the NSS and NMS. Finally, increasing speed and dissemination of information technology increases the tempo of operations and challenges decision-cycles to execute faster than opponents do.

These forms of complexity —coupled with greater tendencies towards distributed operations, the expanding spectrum of military operations, and the strategic significance

of tactical operations —will require the exercise of organizational and strategic-level conceptual skills. The conceptual skills of *systems understanding* and *filtering information* provide leaders tools for perceiving complex environments and accelerating decision processes. The conceptual skill *intent* allows forces to operate effectively in distributed operations through a shared vision and understanding of purpose.

The strategic significance of tactical operations in a SASO environment validates the need for strategic-level conceptual skills at the organizational-level as demonstrated in the examination of operations in Bosnia-Herzegovina and as previously illustrated in Somalia with Task Force Ranger. Tactical commanders must have the assets and skills needed to interpret the political and social environments that influence tactical operations.

The twenty-first century leadership paradigm provides concepts and principles that integrate leadership, organizations, and conceptual skills to the capacity to function effectively in environments of unprecedented change. Conceptual skills as defined in FM 22-100 represent collaborative processes at the organizational and strategic levels. The degree of leader success will depend largely on the leader's ability to maximize the full potential of these collaborative networks.

These concepts and principles help build teams, units, and organizations that can more effectively exercise conceptual skills and processes at all levels by maximizing the cognitive capacities of individuals and groups. Organizations that practice and embody these principles create deeper understandings of the organization's position in the environment and a greater level of shared knowledge; both understandings help leverage complexity and change.

# ENDNOTES

[1] Robert M. Epstein, <u>Napoleon's Last Victory: 1809 and The Emergence of Modern War</u>. (Fort Leavenworth, Kansas: School of Advanced Military Studies, 1992), 30-31.

[2] Epstein, 30-31.

[3] Headquarters, Department of the Army. <u>Leader Development for America's Army</u>. Army Pamphlet 350-58 (Washington, DC: Government Printing Office, 13 October 1994): 1-4.

[4] Sam C. Sarkesian, LTC, US Army, Retired, "Military Leadership: A Time for a Change." (Military Review 60, no. 9, September 1980): 16-23.

[5] United States Army Training and Army Doctrine Command, <u>Force XXI Operations</u>. TRADOC Pamphlet 525-5 (Fort Monroe, Virginia: Government Printing Office, August 1994), 1-1 --1-4.

[6] Ibid., 2-3 --2-11.

[7] Ibid., 1-3 --1-4.

[8] Herbert F. Harback, COL and Ulrich H. Keller, COL, "Learning Leader XXI". (Military Review 75, no. 3, May-June 1995): 33.

[9] Harback and Keller, 30.

[10] Douglas A. Gilbert, LTC, "Leader XXI Campaign Plan". (Military Review 76, no. 1, January-February 1996): 50.

[11] Gilbert, 52.

[12] Ibid., 7-1.

[13] Ibid., 7-1.

[14] Ibid., 2-22.

[15] Headquarters, Department of the Army. <u>Operations: Revised Final Draft</u>. FM 100-5. (Washington, DC: Government Printing Office, June 1998): 3-9.

[16] FM 22-100, p. 6-7.

[17] Peter M. Senge, <u>The Fifth Discipline: The Art & Practice of The Learning Organization</u>. (New York: Doubleday, 1990), 6-7

[18] Senge, 6-7.

[19] Dietrich Dorner, <u>The Logic of Failure</u>. (New York: Metropolitan Books, 1996), 72-78.

[20] Dorner, 72-78.

[21] FM 22-100, 7-7.

[22] Ibid., 7-8.

[23] Ralph D. Sawyer, <u>Sun Tzu: Art of War</u>. (Boulder, Colorado: Westview Press, 1994), 167-215.

[24] TRADOC 525-5, 1-1.

[25] Jon Fallesen, <u>Developing Conceptual Thought: Facilitating Depth of Thinking of Battle Commanders</u>. (Fort Leavenworth, Kansas: US Army Research Institute-Draft Concept Paper, September 1998), 3.

[26] TRADOC 525-5, 2-5.

[27] Fallesen, 2.

[28] Ibid., 2.

[29] Ibid., 2.

[30] Harback and Keller, 30.

[31] Fallesen, 2.

[32] FM 100-5, 3-11--3-18.

[33] Bruce Adams, KLSP Director, and Scott W. Webster, KLSP Assistant Director, Kellogg Leadership Studies Project 1994-1997: Rethinking Leadership. (The Burns Academy of Leadership Press, 1998): *i-ix*.

[34] Ibid., 41.

[35] Ibid., 48.

[36] Ibid., 47.

[37] Ibid., 47

[38] Ibid., 47.

[39] Ibid., 48.

[40] Ibid., 48.

[41] Ibid., 48.

[42] Ibid., 48.

[43] Stanley F. Cherrie, BG, "Bosnia Lessons Learned —Task Force Eagle". (Military Review 77, no. 4, July-August 1997): 62.

[44] David L. Grange, MG, and John S. Rovegno, LTC, "Setting the Stage —Peacekeeping Operations Demand Unconventional Military Approaches". (Armed Forces Journal International 135, no. 8, March 1998): 44.

[45] Ibid., 44.

[46] Center For Army Lessons Learned. Operation Joint Endeavor-Task Force Eagle Initial Operations. (Fort Leavenworth, Kansas: Initial Impressions Report, May 1996), i-xviii.

[47] Ibid., i-xviii.

[48] Ibid., i-xviii.

[49] Grange and Rovegno, 45.

[50] Ibid., 44.

[51] Ibid., 44.

[52] Operation Joint Endeavor-Task Force Eagle Initial Operations, 9.

[53] Harback and Keller, 30-34.

[54] Ibid., 30-34.

[55] Ibid., 30-34.

[56] Ibid., 30-34.

[57] Peter Schifferle, LTC, "Interview with Lieutenant Colonel Peter Schifferle, Chief, War Plans, ACofS, V Corps by Major Richard Thurston, 90th Military History Detachment". (Conducted at Campbell Barracks, Heidelberg, Germany, 16 February 1996): 1-28.

[58] Ibid., 1-28.

[59] Ibid., 1-28.

[60] Ibid., 1-28.

[61] Operation Joint Endeavor-Task Force Eagle Initial Operations, 2.

[62] Ibid., 1

[63] Ibid., 82-84.

[64] Ibid., 82-84.

[65] Cherrie, 65.

[66] Ibid., 71.
[67] Operation Joint Endeavor-Task Force Eagle Initial Operations, 87.
[68] Fallesen, 1-29.
[69] FM 22-100, 7-1.

# BIBLIOGRAPHY

## Books

Dorner, Dietrich, The Logic of Failure. New York: Metropolitan Books, 1996.

Bruce Adams, KLSP Director, and Scott W. Webster, KLSP Assistant Director, Kellogg Leadership Studies Project 1994-1997: Rethinking Leadership. The Burns Academy of Leadership Press, 1998

Hunt, James G. and John D. Blair, Leadership on the Future Battlefield. Washington, DC and London: Pergamon-Brassey's International Defense Publishers, 1985.

Keegan, John, The Mask of Command. New York: Viking Press, 1987.

Kellett, Anthony, Combat Motivation. Boston: Kluwer Nijhoff Publishing, 1982.

Marshall, S.L.A., Men Against Fire. Gloucester: Peter Smith, 1978.

Piattelli-Palmarini, Massimo, Inevitable Illusions. New York: John Wiley & Sons, Inc., 1994.

Rost, Joseph C. Leadership: For the Twenty-First Century. New York: Praeger, 1991.

Senge, Peter M., The Fifth Discipline: The Art & Practise of the Learning Organization. New York: Currency Doubleday, 1990.

Sawyer, Ralph D. Sun Tzu: Art of War. Colorado: Westview Press, 1994.

Van Crevald, Martin, Command in War. Cambridge: Havard University Press, 1985.

Waldrop, M. Mitchell, Complexity: The Emerging Science at the Edge of Order and Chaos. New, York: Simon & Schuster, 1992.

Wheatly, Margret J., Leadership and the New Science. San Francisco, CA: Berrett-Koehler Publishers, 1993.

## Articles

Bass, Bernard M., "Learning in the Army After Next." <u>Military Review</u>. (March-April: 1998), pp. 46-57.

Cherrie, Stanely F., "Task Force Eagle." <u>Military Review</u>. (July-August: 199), pp. 63-73.

Gawrych, George W., "Roots of Bosnia Realities." <u>Military Review</u>. (July-August: 1997), pp. 79-86.

Gilbert, Douglas A., "Leader XXI Campaign Plan." <u>Military Review</u>. (January-February: 1996), pp. 50-55.

Grange, David L. and Rovegno, John S., "Setting the Stage—Peacekeeping Operations Demand Unconventional Military Approaches." <u>Armed Forces Journal International</u>. (March: 1998), pp. 44-45.

Gumbert, Jack, "Leadership in the Digitized Force" <u>Military Review</u>. (January-February: 1998), pp. 13-23.

Harback, Herbert F., and Keller, Ulrich H., "Learning Leader XXI " <u>Military Review</u>. (May-June: 1995), pp. 30-37.

Horner, Donald A., "Leader Development and Why it Remains Important." <u>Military Review</u>. (July-August: 1995), pp. 76-87.

Kretchik, Walter E., "Force Protection Disparities." <u>Military Review</u>. (July-August: 1997), pp. 73-78.

McAlister, Jame M., "Vision Precedes Success." <u>Military Review</u>. (January-February: 1998), pp. 24-34.

Peters, Ralph, "Our Soldiers, Their Cities." <u>Parameters: Journal of the US Army War College</u>. (Spring: 1996), pp. 43-50.

Reimer, Dennis J., "Developing Great Leaders in Turbulent Times." <u>Military Review</u>. (January-February: 1998), pp. 13-23.

Sarkesian, Sam C., "Military Leadership: A Time for a Change." <u>Military Review</u>. (September: 1980), pp. 16-23.

Schmidt, John F., "Command and (Out of) Control: The Military Implications of Complexity Theory." <u>Marine Corps Gazette</u>. (September: 1998), pp. 55-61.

Ulmer, Walter F., "Military leadership into the 21$^{st}$ century: Another "bridge too far?" <u>Parameters: Journal of the US Army War College</u>. (Spring: 1998), pp. 1-19.

## Government Documents

FM 22-100, <u>Military Leadership</u>. Washington, DC: Government Printing Office, 1990.

FM 22-100, <u>Military Leadership</u>. Fort Leavenworth: Revised Final Draft, 1998.

FM 100-5, <u>Operations</u>. Washington, DC: Government Printing Office, 1993.

FM 100-5, <u>Operations</u>. Fort Leavenworth: Revised Final Draft, 19 June 1998.

FM 101-5, <u>Staff Organization and Operations</u>. Washington, DC: Government Printing Office, 1997

FM 101-5-1, <u>Operational Terms and Symbols</u>. Washington, DC: Government Printing Office, 1996

FM 100-7, <u>Decisive Force: The Army in Theater Operations</u>. Washington, DC: Government Printing Office, 1995

FM 100-23, <u>Peace Operations</u>. Washington, DC: Government Printing Office, 1994

TRADOC Pamphlet 525-5, <u>Force XXI Operations</u>. Fort Monroe, Virginia: Government Printing Office, 1994

CALL, Center For Army Lessons Learned, <u>Operation Joint Endeavor-Task Force Eagle Initial Operations</u>. Fort Leavenworth, Kansas: Initial Impressions Report, 1996

## Theses and Monographs

Epstein, Robert M. "Napoleon's Last Victory: 1809 and The Emergence of Modern War." Thesis, Fort Leavenworth, Kansas: School of Advanced Military Studies, 1992.

## Unpublished Material

Fallesen, Jon, "Developing Conceptual Thought: Facilitating Depth of Thinking of Battle Commanders" <u>US Army Research Institute —Draft Concept Paper</u>. (September: 1998), pp. 1-31

Fallesen, Jon, and Pounds, Julia, "Identifying and Testing a Naturalist Approach for Cognitive Skill Training." US Army Research Institute for the Behavioral and Social Sciences. (May: 1998), pp. 1-11.

Schifferle, Peter LTC, "Interview with Lieutenant Colonel Peter Schifferle, Chief, War Plans, ACofS, V Corps by Major Richard Thurston, 90th Military History Detachment". (Conducted at Campbell Barracks, Heidelberg, Germany, 16 February 1996): 1-28.